SCHOOL OF PUBLIC HEALTH
UNIVERSITY AT ALBANY State University of New York

University at Albany
Center for Public Health Preparedness

Grand Rounds Series

Thursday, April 13, 2006,

10–11 a.m. & 4-5 p.m. (ET)

Systems or Symptoms?

Finding the Right Balance
in Preparing for Emergencies

Presented by the
University at Albany School of Public Health
A Member of the New York Consortium for
Emergency Preparedness Continuing Education
(NYCEPCE)

Speakers

Kristine M. Gebbie, DrPH, RN
Elizabeth Standish Gill Associate Professor of Nursing
Director, Center for Health Policy
School of Nursing, Columbia University

Steven H. Silber, DO, FACEP
Vice Chairman, Dept. of Emergency Medicine,
Chairman, Emergency Preparedness Committee,
New York Methodist Hospital,
Chairman, Bioterrorism/Emergency Preparedness
Committee for the New York Presbyterian
Healthcare System

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- **Health Resources and Services Administration**
- **Bioterrorism Training and Curriculum Development Program**

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Fax: 518-426-0696

Evaluation

http://tinyurl.com/zgzxo
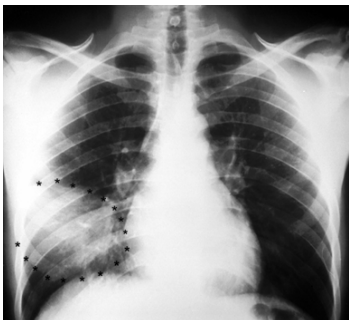
What is This?

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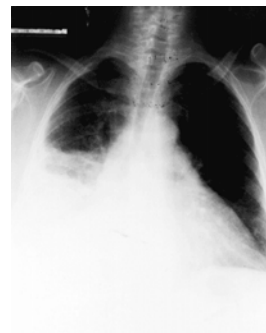## What is This?

What is This?

It's an Emergency!

- **Do you run or stay?**
- **Where do you go?**
- **Who is in charge?**
- **What is your job?**

Clinicians Respond to Symptoms

- **All clinicians are trained to**
  - **Recognize symptoms**
  - **Diagnose specific problems**
  - **Initiate treatment**
  - **Monitor patient progress**

Symptoms are Sexy

- **New**
- **Unusual**
- **Often lethal (in bioterrorism)**

Symptoms are Easy

- **Declarative knowledge: simple to research, present, and test**
- **Self study or development of training for groups can occur in isolation; little need for challenging group work**
- **Studied independently**
- **Often have a right answer**

But How Many Can You Know?

bt.cdc.gov

Systems are Complicated

- **Involve many roles, disciplines, personalities, policies**
- **Right answers are rare**
- **Goals and outcomes difficult to specify**
- **Conflicts frequent**
- **In disaster response, not the usual hierarchy (MD, Nurse, PA, etc)**

…But Individual Roles May Not Be

- Even within complicated systems there can be clear guidance for individuals, or groups of individuals
- Some systems have wide-spread applicability, which means roles once learned can be used over and over again

What is a System?

- An organized or connected group of objects.
- A set or assemblage of things connected, associated, or interdependent, so as to form a complex unity; a whole composed of parts in orderly arrangement according to some scheme or plan; rarely applied to a simple or small assemblage of things
- In various scientific and technical uses: A group, set, or aggregate of things, natural or artificial, forming a connected or complex whole.
- An organized scheme or plan of action, esp. one of a complex or comprehensive kind; an orderly or regular method of procedure.

Oxford English Dictionary

Interdependency

- Acknowledging the <u>system</u> means acknowledging the <u>interdependency</u> of the separate elements.
- One element affects the others, and one element can rely on the others.

Lessons Learned Point to Systems

- Past events had both successes and failures that underscore the importance of systems:
  - Loma Prieta Earthquake (1989)
  - Hurricane Andrew (1992)
  - 9/11 (2001)
  - Anthrax letters (2001)
  - SARS (2003)
  - Hurricane Katrina (2005)

Key Elements to Consider

- Communications
- Coordination
  - Internal: First and secondary responders
  - External: Interhospital, Interagency, Intermunicipality
- Staff

Importance of Systems

- Provides basic order
- Helps ensure worker safety
- Allows leadership to maintain oversight of resource usage
- Connects individuals to all others in system, connecting people with resources and knowledge

Health Workers Are Everywhere

- **Hospitals**
- **Private practice**
- **Health departments**
- **Human service agencies/organizations**
- **Business & industry**

Training Time Challenge

- **Health knowledge is always changing, and everyone needs updates**
- **Time in training is time not bringing revenue**
- **Supervisors vary in support for continuing education**
- **Competing demands for limited training time**

Factors in Retention/Transfer

- **Use or reinforcement (10 min., 1 day, 1 month later to store in long-term memory)**
- **Perceived relevance and reward**
- **Support of co-workers and supervisor**
- **Support of organization (protocols, policies, checklists, etc)**
- **Well-designed training**

Hazards and Responses

Hazard	Probability	Can *study* correct response	Can *remember* correct response	Use Emergency Response System
Natural Disasters	**Very high** ○	**Very high** ○	**Very high** ○	**Very high** ○
Anthrax	**?**	**?** ◐	◐	**Very high** ○
Plague	**?**	**?** ◐	◐	**Very high** ○
Nuclear Bomb	**?**	**?** ◐	◐	**Very high** ○

Which System?

	Everyday	Emergencies
System:	Informal roles, consensus decision-making	Command & control
	Historic/inherited	Incident-specific/Flexible
	Programmatic	Functional
	Agency-specific	Interoperable
Conditions:	Complex long-term problems	Limited resources, information, time
	Long-term worker motivation	New hazards
	Some mistakes are educational	Increased stress

→ Emergency event

Public Health Preparedness for Threats and Emergencies

- **Workforce**
- **Information Systems**
- **Communication**
- **Epidemiology/Surveillance**
- **Laboratory**
- **Policy and Evaluation**
- **Preparedness and Response**

CDC Health Update, Health Alert Network November 14, 2001

Benefits of Emergency Response Systems

- Most efficient use of what we have
- Clear assignment of roles
  - Job action sheet
- Resource channels
- Communication channels
- Conflict resolution (e.g. authority, command)

Example Emergency Response <u>Systems</u>

- Incident Command System (ICS)
- Person-to-person communications
- Laboratory
- Regional health alert/information network

Uncoordinated Resources/Freelancers
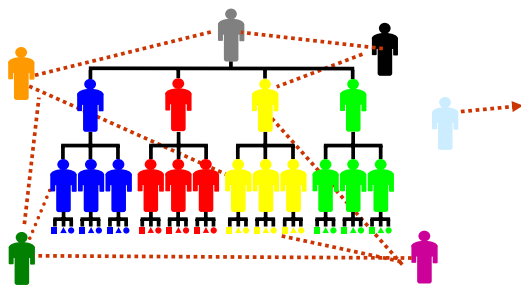
Uncoordinated Resources/Freelancers

- Are <u>not</u> resources
- Are:
  - Added variables
  - Increased uncertainty
  - Cause of diversion
  - Uninformed
  - Poor team players

Uncoordinated Resources/Freelancers cont.

- You may have unique expertise, but you need to be able to be put in the position to use it.
  - If you don't know how to get to work, where to report once there, and the organizational structure and environmental conditions that you will be working under, your effectiveness will be significantly limited.
- In an effective team you know the rules of the other positions.

Balancing Systems and Symptoms

- Depends on place of practice and specialty
- Specific clinical training: Emergency department, public health epidemiology unit
- Systems training: Cardiology practice, home health care
- "Need to know" versus "need to know where to find it"

Knowledge of Symptoms

- **Clinicians like to see slides about symptoms!**
- **Rapidly transferable, replicable**
- **Suitable for "just-in-time" training**
- **Train if new threat/increased threat identified**
- **Can be practiced and evaluated independently**

Advanced Agent Training

- **Key roles (e.g., laboratorians)**
- **Central hubs (e.g., CDC, state DOH) that regularly review suspect cases**
- **Highly self-directed learners**

Opportunities for Advanced Training

- **DMAT teams**
- **International disaster response agencies**
- **Medical Reserve Corps**
- **Military reserve**

Risks of Overcompensating Towards Symptoms Training

- **Low chance of use**
- **Temptation to exceed knowledge or responsibilities**

Systems Training

- **Emergency systems training has wide applicability**
  - **All types of emergencies**
  - **Large or small events**
  - **Meets several regulatory requirements**

Exercises & Evaluation

- **Classroom is not sufficient**
- **Role shifts during an emergency require practice**
- **No event or exercise follows a plan exactly**
- **Every event or exercise provides new insight on how to do it better**

NIMS Compliance

- **"IS-700 NIMS: An Introduction**
  All personnel with a direct role in emergency preparedness, incident management or response must complete this training."

  - The NIMS Integration Center
  October 2005

A Good Emergency System:

- **Provides access to specific expertise on clinical issues**
- **Includes capacity to update and refresh clinicians**
- **Respects the capacity of individuals to retain infrequently used material**

How to Advocate for Systems Training

- **Practice advocacy and leadership skills**
- **Demonstrate use in exercises**
- **Improve through evaluation and feedback**
- **Cultivate sense of ownership among all, so everyone becomes an advocate**
- **Prepare people for career-long exposure to readiness and drills**

Systems Training Strategies

- **Include enough clinical detail to be attractive without overwhelming the core competencies to be taught**
- **Develop honesty with learners about the likelihood of their recall of details, and thus the need to learn how to use resources**

Contributors & Contact Information

- **New York Consortium for Emergency Preparedness Continuing Education: www.nycepce.org**
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NYCEPCE Online Training

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May 11, 2006
Ethical Issues in Pandemic Influenza Planning and Response **Harvey Kayman, MD, MPH** **Director of the Maternal & Child Health Bureau of the South Carolina Department of Health & Environmental Control**